	Ministry of Higher Education and Scientific Research - Iraq University of Baghdad College of Engineering Department of Computer Engineering	

MODULE DESCRIPTOR FORM
نموذج وصف المادة الدراسية

Module Information
معلومات المادة الدراسية

Module Title	**Computer Programming**		**Module Delivery**	
Module Type	**CORE**		**Class lecture + Lab**	
Module Code	**COE108**			
ECTS Credits	**5**			
SWL (hr/sem)	**125**			
Module Level	1	**Semester of Delivery**	2	
Administering Department	Computer	**College**	Engineering	
Module Leader	**Abdul lateef Ali Hussain**	**e-mail**	**abdullateef.ali@alnaji-uni.edu.iq**	
Module Leader's Acad. Title	**Assist. Prof.**	**Module Leader's Qualification**	**Ph. D**	
Module Tutor		**e-mail**		
Peer Reviewer Name		**e-mail**		
Review Committee Approval		**Version Number**	1.0	

Relation With Other Modules
العلاقة مع المواد الدراسية الأخرى

Prerequisite module	**COE103**	**Semester**	1.1
Co-requisites module	None	**Semester**	

<table>
<tr><th colspan="2">Module Aims, Learning Outcomes and Indicative Contents
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية</th></tr>
<tr><td>Module Aims
أهداف المادة الدراسية</td><td>• Learning how to use functions in programming.
• Learning how to use Modules to solve real-life and scientific problems.
• Gaining knowledge of essential OOP concepts like: class, inheritance, and data encapsulation.</td></tr>
<tr><td>Module Learning Outcomes

مخرجات التعلم للمادة الدراسية</td><td>By the end of this module, students will be able to:

1. Understand and Use Standard Data Structures
o Learn to use Tuples, Sets, and Dictionaries
2. Process Text Files
o Read from and write to a text file
3. Understand and Use Functions
o Describe why functions are used.
o Use functions to solve problems.
o Learn passing argument to functions, returning values from functions, and using recursive functions.
4. Understand and Use Modules
o Understand what a module is.
o Learn how to use modules or parts of modules.
5. Use Modules in Various Applications
o Learn using widely used modules like: os, pandas, selenium, Beautiful Soup, JSON, and Matplotlib in various applications.
6. Get Essential Knowledge About OOP
o Get knowledge of essential OOP concepts like: class, inheritance, and data encapsulation</td></tr>
<tr><td>Indicative Contents
المحتويات الإرشادية</td><td>• Standard Data Structures
• Files
• Functions and Recursive Functions
• Modules
• Classes</td></tr>
<tr><th colspan="2">Learning and Teaching Strategies
استراتيجيات التعلم والتعليم</th></tr>
<tr><td>Strategies</td><td>1) Lectures.
2) Homework and Assignments.
3) Tests and Exams.
4) In-Class Questions and Discussions.
5) In- and Out-Class oral conversations.</td></tr>
</table>

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	79	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5.3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	46	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation تقييم المادة الدراسية					
		Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	10% (10)	4, 8, 12	LO #1-3, LO #4-5, LO #6
	Assignments	2	5% (5)	8, 14	LO #1-3, LO #4-5
	Lab.	5	20% (20)	1-15	LO #1-6
Summative assessment	Project	1	5% (5)	12	LO # 1-6
	Mid Exam	1	10% (10)	15	LO # 1-4
	Final Exam	4 hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Review to Python Programming
Week 2	Python standard data structures: Tuples, Sets, and Dictionaries
Week 3	Python text files: reading from and writing to a file
Week 4	Python function creation, return values and calls
Week 5	Function arbitrary arguments, passing lists to a function, and recursive functions
Week 6	Python module: os
Week 7	Python module: pandas
Week 8	Python module: selenium
Week 9	Python module: Beautiful Soup
Week 10	Python module: JSON

Week 11	Python module: Matplotlib
Week 12	Applications of Python Modules: Excel manipulation
Week 13	Applications of Python Modules: using API’s
Week 14	Applications of Python Modules: web scraping
Week 15	Python classes and OOP: classes, objects, attributes, and methods.
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Review to Python Programming
Week 2	Python standard data structures: Tuples, Sets, and Dictionaries
Week 3	Python text files: reading from and writing to a file
Week 4	Python function creation, return values and calls
Week 5	Function arbitrary arguments, passing lists to a function, and recursive functions
Week 6	Python module: os
Week 7	Python module: pandas
Week 8	Python module: selenium
Week 9	Python module: BeautifulSoup
Week 10	Python module: JSON
Week 11	Python module: Matplotlib
Week 12	Applications of Python Modules: Excel manipulation
Week 13	Applications of Python Modules: using API’s
Week 14	Applications of Python Modules: web scraping

Week 15	Python classes and OOP: classes, objects, attributes, and methods.
Week 16	Final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts		
Recommended Texts	• Brian Heinold, A Practical Introduction to Python Programming, 2012 • Ben Stephenson, The Python Workbook: A Brief Introduction with Exercises and Solutions, 2014	No
Websites	https://www.w3schools.com/python/	

APPENDIX:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	**A – Excellent**	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D – Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX – Fail**	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.